

What is claimed is:

1. A structure formed by chemical vapor deposition having a planar direction and a normal direction, wherein the structure has a dimension in the planar direction that is larger than the dimension in the normal dimension and having grains substantially oriented in the planar direction.
2. The structure of claim 1, wherein the structure is a flat ring having a circumference and wherein the grains are oriented in a substantially radial direction around the circumference of the ring.
3. The structure of claim 1, wherein the structure comprises silicon carbide.
4. The structure of claim 1, wherein the structure is a ring that comprises an inner diameter and an outer diameter and wherein the distance between the inner diameter and outer diameter is approximately one inch.
5. The structure of claim 4, wherein the inner diameter is between about 100 mm to 600 mm in diameter.
6. The structure of claim 1, having an axial thickness of between about 0.2 inches to fourteen inches.

7. The structure of claim 1, wherein the structure is a flat ring that has a curved outer surface.
8. The structure of claim 1, wherein the structure is a flat ring having a circumference that has substantially symmetrical stresses around the circumference of the ring.
9. The structure of claim 1, further comprising a layer of silicon deposited on at least one surface thereof.
10. A method of making flat rings by chemical vapor deposition, comprising:
 - (a) providing a round cross-sectional tube in a deposition zone;
 - (b) directing precursor gas into the tube;
 - (c) chemically reacting the precursor gas to form a solid deposit in the shape of the tube on the inside on the tube;
 - (d) removing the solid deposit; and
 - (e) dividing the solid deposit into substantially flat rings either before or after removal.
11. The method of claim 10, wherein the precursor gas comprises methyltrichlorosilane.
12. The method of claim 10, wherein the tube comprises a graphite tube.

13. The method of claim 10, wherein the deposit comprises silicon carbide.
14. The method of claim 10, wherein the tube is provided as a plurality of segments.
15. The method of claim 10, wherein the dividing comprises slicing the deposit into flat rings having an axial thickness of between about 0.2 inches and about fourteen inches.
16. The method of claim 10, further comprising (f) machining the substantially flat rings to desired dimensions.
17. The method of claim 10, wherein the ring has a planar direction and a normal direction with the dimension in the planar direction being larger than the dimension in the normal dimension, and wherein grains of the ring that are deposited by chemical vapor deposition are substantially oriented in the planar direction.
18. The method of claim 17, wherein the ring has a circumference and wherein the grains are oriented in a substantially radial direction around the circumference of the ring.
19. The method of claim 10, wherein several tubes can be positioned within a CVD furnace.

20. The method of claim 10, further comprising applying a coating of silicon to at least one surface of the ring.

21. The method of claim 20, further comprising machining the ring prior to applying the silicon coating.

22. The method of claim 20, wherein the silicon coating is applied using chemical vapor deposition.